remain pending, with claims 6 – 20 withdrawn from consideration as drawn to a non-elected invention.

Procedural Issues:

The Examiner did not acknowledge Applicants' claim for foreign priority from Japanese Patent Application No. 11-183908 ("JP '908"), filed June 29, 1999, and also did not acknowledge receipt of the priority document. Applicants' Claim for Priority and a certified copy of the priority document were filed on May 8, 2001. Applicants attach a copy of the first page of JP '908, along with the date-stamped postcard, to corroborate that the certified copy of the priority document was indeed filed. Applicants therefore request that the Examiner acknowledge that certified copies of the priority documents have been received.

Further, Applicants note that the filing receipt does not identify the proper foreign application from which Applicants claimed priority. The correct foreign application is JP '908, as indicated above. Applicants have submitted, concurrent with this Amendment, a Request for Corrected Filing Receipt.

Substantive Issues:

In the Office Action, the Examiner required a new title; rejected claims 1, 4, and 5 under 35 U.S.C. § 102(b) as anticipated by Yoshikawa, et al. (U.S. Patent No. 4,434,224); and rejected claims 2 and 3 under 35 U.S.C. § 103(a) as unpatentable over Yoshikawa in view of Shiraki, et al. (U.S. Patent No. 6,279,585B1).

Applicants have amended the title to be more descriptive, thereby satisfying the Examiner's requirement of a new title that is clearly indicative of the present invention. Applicants therefore deem the Examiner's objection to the title overcome.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Regarding the claims, Applicants respectfully traverse the rejection of claims 1, 4, and 5 under 35 U.S.C. § 102(b) as anticipated by Yoshikawa, and the rejection of claims 2 and 3 under 35 U.S.C. § 103(a) as unpatentable over Yoshikawa in view of Shiraki.

Applicants point out that in order to properly establish that Yoshikawa anticipates Applicants' claimed invention under 35 U.S.C. § 102(b), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in that reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See M.P.E.P. §2131, 8th Ed., Aug. 2001, p. 2100-69, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. §2131, p. 2100-69. Regarding the 35 U.S.C. § 102(b) rejection, Yoshikawa does not teach each and every element of Applicants' present invention as claimed.

Applicants' claim 1 recites, *inter alia,*

> "forming a soluble thin film which is soluble in a dissolving liquid on a film to be processed which is formed on a semiconductor substrate; *forming a mask layer on the soluble thin film*; forming a resist pattern on the mask layer; etching the mask layer using the resist pattern as a mask to form a mask pattern; etching the soluble thin film and the film to be processed using the mask pattern as at least a portion of a mask; and dissolving the etched soluble thin film in the dissolving liquid, thereby lifting off the mask pattern from the film to be processed" (italics added).

In contrast, Yoshikawa discloses, in Figs. 6a – 6c, an organic polymer resist material layer 2 on substrate material 7 (Fig. 6a), on which a *thin film layer 8* (Fig. 6b) is formed. "[T]he organic polymer resist material layer 2 is removed together with the thin film layer 8 thereon, whereby a desired thin film pattern is formed as shown in FIG. 6c" (Yoshikawa, col. 11, ll. 9 – 12).

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

The Examiner incorrectly alleges that Yoshikawa "shows an analogous method for pattern formation including steps of forming a soluble thin film (2) ...; *forming a mask layer (8)* on the soluble thin film (2)..." (Office Action, p. 2, italics added). Yoshikawa's thin film 8 is clearly *not* a mask layer. This is further evidenced by the recitations of Yoshikawa's claim 13, which provides for "forming a thin film layer on said inorganic resist material layer and said surface of layer to be worked of the substrate material in a region which is not covered with said organic polymer resist material layer, and removing said inorganic and organic polymer resist material layer together with said thin film layer formed on said inorganic resist material layer." Finally, close examination of Yoshikawa's Figs. 6a – 6c reveals that thin film layer 8 cannot be a mask layer. The mask protecting substrate material 7 is organic polymer resist material layer 2, on which thin film layer 8 is blanket deposited. Organic polymer resist material layer 2 protects certain portions of substrate material 7 from deposition of thin film layer 8. When the 'mask' of organic polymer resist material layer 2 is removed, thin film layer 8 remains only in designated patterned areas as shown in Fig. 6c. Therefore, thin film layer 8 is not a mask layer.

Thus, Yoshikawa does not anticipate Applicants' claimed invention. Furthermore, even if Yoshikawa did anticipate the present invention (which it does not), "[t]he identical invention must be shown in as complete detail as is contained in the ... claim," and "[t]he elements must be arranged as required by the claim." M.P.E.P. §2131, p. 2100-69, citations omitted. Yoshikawa does not disclose an identical invention, let alone in as complete detail as contained in Applicants' claim 1. Applicants submit that the Examiner has not met these essential requirements of anticipation for a 35 U.S.C. § 102(b) rejection. Therefore, the rejection is improper and should be withdrawn.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Since Yoshikawa does not disclose each and every element of Applicants' present invention, Yoshikawa does not anticipate independent claim 1. Therefore, Applicants respectfully submit that claim 1 is patentable over Yoshikawa, as are claims 4 and 5, at least by virtue of their dependence from allowable base claim 1.

Regarding the 35 U.S.C. § 103(a) rejection of claims 2 and 3, Applicants respectfully disagree with the Examiner's arguments and conclusions. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. ... If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious." M.P.E.P. § 2143.03, p. 2100-26.

Furthermore, "Examiners are reminded that a dependent claim is directed to a combination including everything recited in the base claim and what is recited in the dependent claim. It is this combination that must be compared with the prior art, exactly as if it were present as one independent claim." M.P.E.P. § 608.01(n)(III), p. 600-77.

Applicants have already demonstrated that Yoshikawa fails to teach or suggest all of the features of independent claim 1, as pointed out above. Furthermore, the fact that Shiraki teaches an etching method does not render Applicants' invention obvious because Shiraki does teach or suggest the features of the present invention not taught or suggested by Yoshikawa. The Examiner admits that "Yoshikawa does not teach using a soluble thin film from the group consisting of tungsten oxide, aluminum oxide, titanium oxide, and titanium nitride and that the dissolving liquid is either water or alkaline solution" (Office Action, p. 3). This statement still does not address the recitations of independent claim 1 that Yoshikawa does not teach.

The Examiner has therefore not met at least one of the essential criteria for establishing a *prima facie* case of obviousness, wherein "the prior art reference (or references when combined)

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

must teach or suggest all the claim limitations." See M.P.E.P. §§ 2142, 2143, and 2143.03. Thus, dependent claims 2 and 3 are also allowable at least by virtue of their dependence from allowable base claim 1. Therefore, Applicants respectfully submit that the Examiner should withdraw the 35 U.S.C. § 103(a) rejection.

Finally Applicants have introduced new claims 21 – 23 to provide coverage for other aspects of Applicants' invention. Applicants submit that new claims 21 – 23 are supported by the originally filed application, and therefore do not constitute new matter. Independent claim 21 contains recitations in addition to those in allowable claim 1. Therefore, Applicants submit that new claim 21 is allowable, as are claims 22 and 23, at least by virtue of their dependence on allowable claims 21 and 1, respectively.

Applicants request that the Examiner withdraw the rejection of claims 1 – 5, as detailed above. Pending claims 1 – 5 and 21 – 23 are in condition for allowance. A favorable action is requested.

Please grant any extensions of time under 37 C.F.R. § 1.136 required in entering this response. If there are any fees due under 37 C.F.R. § 1.16 or 1.17, which are not enclosed, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: April 26, 2002

By: Richard V. Burgujian Reg #24,014
for Reg. No. 31,744

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

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Attorney Docket Number: 04329.2335

APPENDIX TO AMENDMENT OF April 26, 2002

Version of Title with Markings to Show Changes Made

AMENDMENTS TO THE TITLE

The title of the application should be amended as follows:

HIGH PRECISION PATTERN FORMING METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com